What is claimed is:

1. A method of protecting Flash memory against alterations, comprising providing different degrees of protection including persistently locking a sector for preventing modification of the sector, and dynamically locking a sector which prevents modification of the sector without first resetting a protection bit.

2. A method of Claim 1, wherein persistently locking a sector, includes assigning a persistent protection bit (PPB) in non-volatile memory.

3. A method of Claim 1, wherein dynamically locking a sector, includes assigning a dynamic protection bit (DPB) in a volatile memory. This volatile memory may take the form of flip-flops.

4. A method of Claim 3, wherein the DPBs are individually modifiable through a write command.

5. A method of Claim 3, wherein after a power-up or a hardware reset all DPBs are either set or reset, depending on the desired default state.

6. A method of Claim 2, further comprising a further level of protection applying to the persistent locking of the sectors, by making use of a PPB lock bit in volatile memory, which, when set, prevents the states of the PPBs being changed.

7. A method of Claim 1, further comprising holding a write protect pin low to prevent certain sectors being changed.

8. A method of Claim 7, further comprising maintaining boot code in said certain sectors.

9. A method of Claim 6, further comprising including a password mode requiring that a password be entered in order to clear the PPB lock bit.

10. A method of Claim 9, wherein the password is a fixed password.

11. A method of Claim 9, wherein the password is variable and is produced by a dynamic password algorithm.

12. A method of Claim 9, wherein when password mode is selected, the PPB lock bit is in a set state when the device is first powered on or comes out of a reset cycle.

13. A method of Claim 10, wherein the password is stored in a one time programmable region of the Flash memory.

14. A method of Claim 9, wherein a password mode locking bit is assigned which permanently sets the Flash memory in password mode.

15. A method of Claim 9, wherein a non-password mode locking bit is assigned which, once set, permanently prevents entering the password mode.

16. A method of Claim 9, wherein a time delay is introduced between each attempt to clear the PPB lock bit.

17. A method of Claim 9, wherein only a limited number of successive attempts at clearing the PPB lock bit are permitted.

18. A method of Claim 9, wherein a new power cycle is required between attempts to clear the PPB lock bit.

19. A method of Claim 9, wherein the password is related to an electronic serial number (ESN) of the Flash memory.

20. A Flash memory having multiple degrees of protection, comprising

a non-volatile storage area defining at least one Persistent Protection Bit (PPB) which has to be cleared in order to change the contents of the memory, and

a volatile storage area defining at least one Dynamic Protection Bit (DPB), which has to be cleared in order to change the contents of the memory.

21. A method of Claim 20, wherein the volatile storage area further defines at least one PPB lock bit which, when set prevents the at least one PPB from being cleared.

22. A method of Claim 21, wherein each DPB and each PPB lock bit can be cleared only by means of a power-up or hardware reset.

23. A method of Claim 21, wherein there is one PPB and one DPB per sector of the Flash memory, and a single global PPB lock bit for all sectors.

24. A Flash memory includes a password or password generating code in the non-volatile storage area in an area that is read and write protected.

25. A method of Claim 24, wherein the password in the non-volatile storage area or generated by the code defines a password that has to be entered to clear the PPB lock bit.

26. A method of Claim 25, wherein the Flash memory includes at least one mode selection bit for selecting password mode or non-password mode.

27. A method of Claim 26, wherein the at least one mode selection bit is located in a one time programmable portion of the memory to permanently lock the memory into one or the other mode.

28. A method of Claim 20, wherein further including a write protect pin to prevent programming or erasing of part of the Flash memory.